VOLUME XIV, ISSUE 2 - MARCH '09

THE

OZARK OBSERVER

NATIONAL WEATHER SERVICE
SPRINGFIELD MO

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Severe Weather Awareness Week March 9-13

State Emergency Management and the National Weather Service (NWS) will conduct a Statewide Severe Weather Tornado Drill at 1:30 p.m., Tuesday, March 10, 2009. Every school, citizen and business is encouraged to participate in the drill by practicing to seek a secure, safe shelter from a tornado. In the event of bad weather on Tuesday, the test day will be postponed to 1:30 p.m., Thursday, March 12th.

The NWS in Springfield Missouri will issue a test tornado warning as part of the drill. However, at the present time, it is unknown whether the NWS will utilize the Emergency Alert System (EAS) TOR code as in past drills. The Federal Communications Commission has raised an issue concerning

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Flood Safety Awareness Week March 16-20

Flash flooding in Southwest Missouri and Southeast Kansas poses a significant threat to life, and produces substantial losses each year in property and infrastructure. Flooding during 2008 resulted in six fatalities across this region alone. In addition, there were hundreds of vehicle water rescues with over 270 individual reports of flash flooding. The rocky and steep terrain of the Ozark Plateau, coupled with hundreds of small streams and rivers, results in a significant flash flood hazard. The threat to life is compounded by the hundreds of low water crossings across the Ozark region.

On average, more deaths occur each year due to flooding than from any other thunderstorm related hazard. Why? The main reason is that people un-

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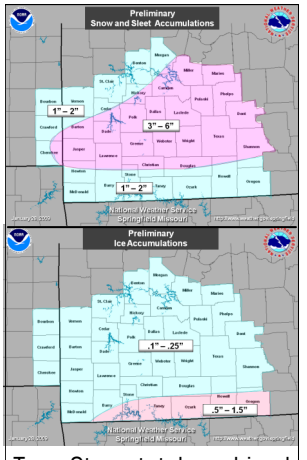
ANOTHER ICE STORM SMASHES THE OZARKS

By Brian Barjenbruch

January 27-29 of 2009 followed the lead of recent winters by bringing yet another significant ice storm to portions of the Ozarks. The brunt of the storm's freezing rain accumulations impacted areas from eastern Oklahoma, through southern Missouri, northern Arkansas, and much of Kentucky. However, the storm's impacts were felt across much of the rest of Missouri and southeast Kansas as well.

This dangerous winter storm began as an area of light freezing drizzle overspread much of extreme southeast Kansas and southwest Missouri. While the precipitation was light, it froze immediately and caused numerous accidents. The freezing rain held on across extreme southern Missouri with up to 1.5 inches of ice accumulation. Mainly sleet and snow fell across the rest of the region with up to 5 inches of sleet reported in Eminence, and 6 inches of snow in Phelps and Maries counties.

National Weather Service offices across the impacted region issued Ice Storm Warnings and Winter Storm Warnings as much as 36 hours in advance of the dangerous winter weather conditions.



Top: Storm total combined sleet and snow amounts
Bottom: Storm total freezing rain accumulations.

SEVERE WEATHER AWARENESS WEEK

MARCH 9 THROUGH 13

By Steve Runnels

the use of the real event code, and until a waiver may be obtained, the NWS is forced to use the Required Weekly Test (RWT) EAS Code. Be aware that the RWT will not tone alert NOAA Weather Radios. It is the strong desire of the NWS to use the TOR code as it will trigger the alert function of weather radios and test the complete communication system between our office and living rooms across the Ozarks.

The Missouri Ozarks and extreme southeast Kansas experience a variety of severe weather including storms producing tornadoes, damaging winds, large hail, and flash flooding. Residents are encouraged to use this week, and the annual drill, to review their severe weather safety plans by practicing what you would do in a real emergency situation with a tornado approaching your area. Visit the Top News of the Day at www.weather.gov/sgf for more information.

STATEWIDE TORNADO SAFETY DRILL MARCH 10, 2009 AT 1:30 PM.

VISIT WWW.WEATHER.GOV/SGF FOR ALL OF OUR SEVERE WEATHER PRODUCTS

SEVERE WEATHER AWARENESS AT THE MALL

MARCH 14TH AT BATTLEFIELD MALL-SPRINGFIELD

By Kelsey Angle

Severe Weather Preparedness and Awareness Day will be held at the Battlefield Mall in Springfield on Saturday, March 14th from 10 AM through 4 PM. The event is free and open to the public. The National Weather Service, in partnership with Battlefield Mall, KOLR 10, KTTS 94.7 FM, and Springfield-Greene County Emergency Management will offer a variety of activities and information to help you plan and prepare for the 2009 severe weather season.

National Weather Service meteorologists will discuss the severe weather threats in the Ozarks and provide severe weather educational materials, including cloud charts, to the first 1,000 participants. KOLR 10 will host a kidcastor contest in which kids will be able to forecast the weather at the event and be filmed. Five of these entries will be selected as winners and will be featured on the KOLR 10 weekday morning news. KTTS 94.7 FM will debut the KTTS 2009 Weather Alert Maps. The Battlefield Mall will host a table for the Simon Kidgits Kids Club in which kids will find weather related activities. The KOLR 10 Weather Van, the KTTS Go Patrol, the Springfield-Greene County Emergency Management Mobile Communications Van, and an interactive booth on the dangers of flooding and vehicles will be on display.

Keep this page for your Weather Reference!

NWS SPRINGFIELD SEVERE WEATHER PRODUCTS

Tornado Warning: A tornado has been spotted, or is likely to develop from within a thunderstorm. A warning is issued for the portion of the storm posing immediate danger.

Tornado Watch: Conditions are favorable for the development of tornadoes within thunderstorms across the watch area. Monitor the weather situation for the possibility of future warnings.

Severe Thunderstorm Warning: Issued for a thunderstorm, or group of thunderstorms which are likely producing hail of 1 inch or greater, winds of 58 mph or greater, or both.

Severe Thunderstorm Watch: Conditions are favorable for the development of severe thunderstorms across the watch area. Be sure to monitor the weather situation for the possibility of future warnings.

Significant Weather Alert: Issued for a thunderstorm producing less than 1 inch, winds more than 50 mph, or both. May also be used to provide information well in advance of a tornadic or severe thunderstorm moving into a region.

Hazardous Weather Outlook: Highlights and describes the potential for hazardous weather through the next 7 days.

Short Term Forecast: Issued to disseminate information for weather which is currently occurring, or may occur shortly. Generally focuses on the next 1 to 3 hours.

FLOOD SAFETY AWARENESS WEEK

TURN AROUND. DON'T DROWN!

By Kelsey Angle and Brian Barjenbruch

derestimate the power of water. Many of the deaths occur in automobiles as they are swept downstream. Of these fatalities, many are preventable, but too many people continue to drive around the road barriers, and drive through dangerous waters.

In fact, would you believe that only 6 inches of water under your vehicle weighs about 1000 pounds? It's true. And when that water can be moving at speeds greater than 20 mph, it is no surprise that it does not take a significant depth to sweep an automobile off of the roadway. In addition, tires often lose contact with the roadway when hitting even shallow water at moderate speeds. As soon as water gets between the road and the tires, the driver will have little control of the automobile. Oftentimes, this results in the vehicle being swept off of the road.

Low water crossings provide a relatively unique flood danger across the Ozarks region. There are literally over a thousand low water crossings throughout Missouri and southeast Kansas. These low bridges and crossings are especially dangerous since they tend to flood quickly, and the water is often deeper than it looks. Many of the crossings typically have very small amounts of water running over them (an inch or two) which people are used to driving through in a non-flood situation. However, the creeks rapidly swell, running deeper and faster than normal during a flood, and only a few more inches of water may be enough to turn an ordinary crossing into a deadly situation.

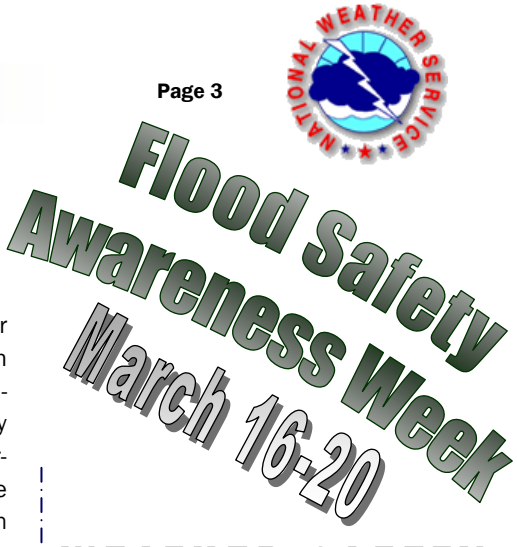
Another factor that frequently contributes to a dangerous situation is the fact that flood waters often erode creek banks and roadways. Long after flooding has receded, roads may give way as a person or vehicle passes over.

VISIT WWW.WEATHER.GOV/SGF FOR ALL OF OUR FLASH FLOOD AND FLOOD PRODUCTS

For additional information on vehicular flood safety, safety information for children, preparation before a flood, and to locate low water crossings in your neighborhood, check out these National Weather Service websites:

http://www.crh.noaa.gov/sgf/?n=floodawarenessweek

http://www.crh.noaa.gov/sgf/?n=lowwatercrossings



WEATHER SAFETY

Tornado: Immediately take shelter, below ground level if possible. Go to an interior room and put as many walls between you and the tornado as you can. If caught in the open, take shelter in a ditch or low area. Cover your head and protect yourself from flying debris.

Severe Thunderstorm: Take shelter in a sturdy building away from windows. Keep in mind that straight line winds and hail can cause significant damage to unsecured buildings such as mobile homes.

Flooding: NEVER drive through flowing water. As little as 6 inches of water can cause your vehicle to lose control. If caught in a situation of rapidly rising waters, move to higher ground as quickly as possible. NEVER underestimate the power of water.

Keep this page for your Weather Reference!

NWS SPRINGFIELD FLOOD PRODUCTS

Flash Flood Warning: Rivers, creeks, and drainages within the warned area will experience a quick and significant rise in water level, producing flooding within 6 hours of the rainfall.

Flash Flood Watch: Conditions will be favorable for the development of heavy rainfall, and the possibility of flash flooding across the watch area.

Flood Warning: Flooding is occurring, or will be occurring across the warned area. Rivers and creeks may be slower to rise, but will impact flood prone areas.

Flood Advisory: Minor flooding is occurring, or will be occurring across the warned area. Flooding will likely be confined to small streams or easily flooded urban areas.

River Flood Warning: A river is forecast to exceed flood stage at a forecast point along the river. The river flood warning will highlight the severity of the flooding, and the forecast river crest height at the forecast point.

Flood Watch: Conditions will be favorable for the development of widespread heavy rain, and the possibility of slow response flooding across the watch area.

Hydrologic Outlook: May be used to alert the public to a potential upcoming flood situation. May also be used to provide a more in depth look at a current or anticipated flood event.

WILDFIRE DANGER ENHANCED DUE TO RECENT ICE STORMS

By: Drew Albert

Ice storms in 2007, 2008, and again in 2009 brought down countless trees and branches in rural woodlands and suburban areas. Tornados and straight line winds from thunderstorms added to the damage in some areas. The result has been millions of tons of woody debris lying on the ground that isn't normally there. Conservation officials say this situation creates an increased danger for severe wildfires.

While wildfires are something people in this area have experienced in the past, all of the extra woody debris on the ground may add to the severity of uncontrolled woodland fires. The amount of debris is ten times greater than normal in many areas, and branches have had time to dry out. The extra fuel means fires will burn hotter and spread more easily. These extra fuels also make fire fighting more difficult and dangerous because areas that were once easy to travel through are now blocked by downed trees.

The late winter and early spring months are the typical fire season for southeast Kansas and southern Missouri, with March and April being the peak months. Periods of dry and windy weather are more common during this time of year as strong areas of fast-moving low pressure frequently move through the region.

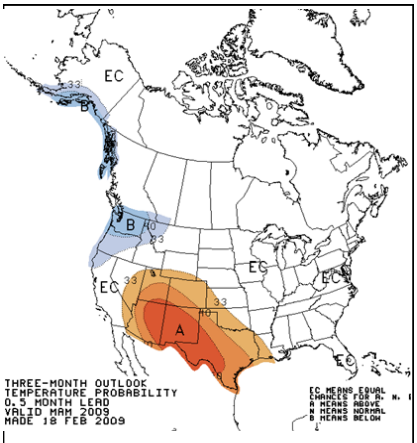
The National Weather Service will issue Fire Weather Watches and Red Flag Warnings when the combination of dry fuels and weather conditions support an extreme fire danger. These conditions alert land management agencies and the public to the potential for widespread fire control problems. For more information on the NWS Springfield, MO Fire Weather program visit our web site at http://www.crh.noaa.gov/sgf/?n=fire_weather. For information on burning, http://mdc.mo.gov/forest/fire/wildfire/ .

SPRING OUTLOOK

By Gene Hatch

Current forecasts from the Climate Prediction Center (CPC) indicate the Missouri Ozarks and southeast Kansas will likely experience near normal spring weather for the region. The official forecast for the area is for Equal Chances (EC). In other words, above normal, below normal, or near normal temperatures and precipitation are all equally likely

LA NINA: The latest measurements of sea surface temperatures in the Pacific Ocean continue to show a weak La Nina. The El Nino-Southern Oscillation (ENSO) forecast is for this to remain in place through the spring 2009 season. The long range climate models then transition ENSO to Neutral conditions for the Summer and Fall months. There continue to be indications that the Pacific Decadal Oscillation (PDO), an ENSO-like pattern of climate variability that varies over decades instead of years, has transitioned to a negative or cool phase, with below normal water temperatures off the west coast. This cool PDO, combined with a La Nina for the Spring, can sometimes create more active weather patterns over the U.S. This may result in slightly increased storm activity, and more frequent changes from warm to cold or wet to dry conditions for some locations. As we head into our active weather season, the NWS Springfield staff will continue to monitor the conditions of the Pacific including ESNO, La Nina and the PDO to provide the best forecast for the Ozarks and southeast Kansas.



The 3 month temperature outlook from the Climate Prediction Center.

TECHNOLOGY CORNER: WEATHER EVENT SIMULATOR

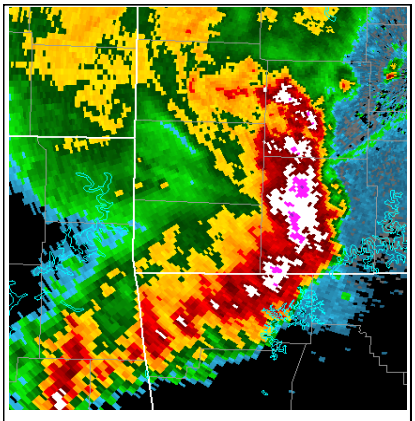
By Brian Barjenbruch

Have you ever wondered how your National Weather Service employees stay in practice during stable weather? The answer lies in the Weather Event Simulator (WES).

The WES is a powerful computer system on site at each National Weather Service office. Meteorologists have the opportunity to use the WES to observe past severe weather events at the same speed with which they occurred. Forecasters then use all of the data they would normally have to issue the watches and warnings that they would issue in a real event. However, they have the luxury of doing this without actually sending the warnings out to the public.

Forecaster Jason Schaumann commented on the benefits of the WES machine. "This is a valuable asset to the National Weather Service in that it continually allows us to hone our skills when it comes to critical weather operations."

In addition to honing NWS warning capabilities, the WES is a valuable tool for testing new techniques, and analyzing why certain weather phenomena happened in a certain situation, better preparing the NWS forecasters for the next round of high impact weather.



The Weather Event Simulator allows NWS meteorologists to examine previous weather events, and practice warning operations in real-time.

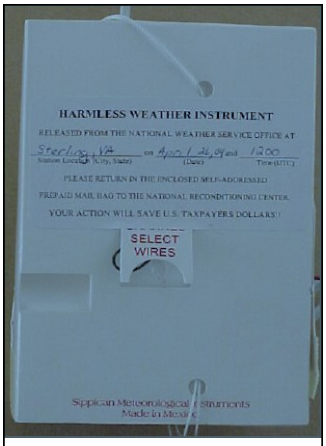
FOUND RADIOSONDES

By Gerald Claycomb

The NWS upper-air network uses about 75,000 radiosondes each year. Radiosondes are weather instruments that the NWS attaches to weather balloons in order to retrieve valuable atmospheric information. These upper air flights are the backbone for verifying and correcting weather forecast model solutions, as well as measuring atmospheric instability needed to forecast severe thunderstorms. That's a lot of instruments and tax payer dollars being released into the atmosphere!

Did you know that these radiosondes can be reused? About 20 percent of the radiosondes are found and returned to the NWS. The weather instruments can then be recycled and repackaged into a new radiosonde to be used at a future date. The savings to taxpayers could be substantial if even a third or more of these weather instruments were returned for reconditioning.

So, what do you do if you find a radiosonde? Here's the answer: If you find one, look for a flap on the cardboard box that says **"Remove Tab For Mailing Instructions".** Inside this compartment, you will find a mail bag (postage is pre-paid) and mailing instructions. After placing the radiosonde in the mailbag, hand the package to your local postal carrier for return to the NWS. Don't worry, the radiosonde is harmless and safe to handle. You may detect an odor coming from the instrument, but this is from a sulfur compound used in the battery. Should you not find an outside cover and the self addressed mailing bag is missing, call your local NWS office, and we will send you a new prepaid envelope. You will be saving money for yourself and all taxpayers by doing this good deed.



The radiosonde instrument box. This may be found connected to an orange parachute. The mail bag Is located within the box, and is labeled on the side.

NWS FIRE WEATHER EXPERTS ASSISTING IN AUSTRALIA

Story Courtesy of NOAA News (www.noaanews.noaa.gov)

Fire weather forecasters from NOAA's National Weather Service are on duty in Australia providing crucial weather information to forecasters in the Australian Bureau of Meteorology as they battle wildfires ravaging southeastern Australia.

NOAA's National Weather Service and the Australian Bureau of Meteorology agreed in 2006 to exchange fire weather expertise and staff during the U.S. and Australian wildfire seasons, which occur at opposite times of the year in the Northern and Southern Hemispheres.

As part of this exchange, two National Weather Service fire weather experts, Brent Wachter of the Albuquerque, N.M. weather forecast office and Daniel Borsum of the Billings, Mont., office were stationed in Australia when the latest wildfires began raging last weekend. Robert Tobin of the Spokane, Wash., office travelled to the Australian state of Tasmania to provide fire weather forecasting support the day after the wildfires began. Wachter has since returned to the United States.

These "incident meteorologists" undergo extensive training to support fire-fighting efforts and are able to forecast weather conditions at precise locations during extreme wildfires.

Wachter was working the fire weather desk in Melbourne on Feb. 7, when the wildfires began raging there. That day, he provided nearly 40 spot forecasts, numerous briefings, critically important wind-change charts as well as many other routine duties related to fire-forecasting. His presence provided needed support so that the Australian meteorologists could grapple with the wildfire emergency. Wachter described the day as "the worst fire weather conditions I have witnessed."

"The United States and Australia face similar challenges with on-going droughts in fire-prone regions...The U.s./Australian exchanges benefit both countries as fire weather forecasters share methods to more effectively face the shared challenges."

When the fires broke out, Borsum was in Adelaide in South Australia. He immediately travelled to Victoria to provide additional support there.

Heath Hockenberry, NWS national fire weather program manager, described their contributions as "direct, high-intensity, high-impact support." Six National Weather Service fire weather forecasters are scheduled for duty in Australia during its current wildfire season. This is the third fire season in which these exchanges have taken place. When the U.S. wildfire season begins this summer, Australian fire weather experts will come to work in National Weather Service forecast offices in wildfire prone areas.

The United States and Australia face similar challenges with on-going droughts in fire-prone regions. Drought conditions are currently worse in parts of Australia, but both countries are contending with urban encroachment on wilderness areas. The U.S./Australian exchanges benefit both countries as fire weather forecasters share methods and tools to more effectively face these shared challenges.

NOAA understands and predicts changes in the Earth's environment, from the depths of the ocean to the surface of the sun, and conserves and manages our coastal and marine resources.

JUNIOR OBSERVER PAGE

Word Find!

Search for these weather words:

- Thunder
- Rain
- Hail
- Flood
- Sunny
- Clouds
- Windy
- Humid

X	W	I	N	D	Y	L	D
F	E	D	C	O	T	N	O
S	C	R	S	E	H	F	O
B	L	Y	N	U	U	S	L
N	O	N	M	L	N	O	F
P	U	I	I	I	D	N	O
Y	D	H	L	A	E	T	Y
F	S	L	L	H	R	C	Y

How Far Away Is the Lightning?

What you will need:

- A Thunderstorm
- A watch with a "seconds" hand, or a stopwatch for very accurate timing.

Steps:

1. Watch the thunderstorm from a safe place indoors. Always be careful with lightning around!

2. When you see a nice, bright flash of lightning, start your stopwatch, or begin counting the number of seconds. 1 Mississippi...2 Mississippi...3 Mississippi...
3. When you hear the thunder, stop the stopwatch, or stop counting.
4. For every 5 seconds that you counted, the lightning struck 1 mile away. To find out how many total miles it was from you, divide the total number of seconds you counted by 5. Don't worry, if you don't know how to divide yet, ask a grownup or use this handy guide below.

5 Seconds = 1 Mile
10 Seconds = 2 Miles
15 Seconds = 3 Miles
20 Seconds = 4 Miles
25 Seconds = 5 Miles

Did You Know???

Holt, MO received a record rainfall of 12 inches in 1 hour on June 22, 1947!

The town of Foc-Foc in the country of La Reunion once received 72 inches of rain in a single 24 hour period. That's 6 feet of rain in one day!

The widest tornado ever measured cut a path 2.5 miles wide through the town of Hallam, NE on May 22, 2004. Most tornadoes are less than 1/4 mile wide!

The strongest measured wind speed in a tornado was 302 mph. This wind was measured at Bridge Creek, OK on May 3, 1999.